ABSTRACT OF THE DISCLOSURE

A method and apparatus for performing classification in a hierarchical classification system performing caching are described. In one embodiment, the method comprises walking a classification tree in the hierarchical classification system to determine whether an incoming flow matches a class in the classification tree, and performing a lookup on a cache storing a data structure of multiple classes of one classification type to compare the incoming flow with multiple classes at the same time to determine whether the incoming flow matches one of the classes.